REMARKS

Claims 24, 26-33, 35-42 and 44-46 are currently pending. Applicant respectfully requests reconsideration of the present application.

Drawings

The Office Action of October 9, 2008 includes an objection to the drawings, suggesting Figs. 36-42 should be labeled as "Prior Art". Pursuant to the examiner's request, replacement sheets of drawings are being submitted in which these figures are labeled as "conventional", consistent with the description in the specification. Withdrawal of the objection to the drawings is respectfully requested.

Allowable Subject Matter

Claims 25-32, 34-41, and 43-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner is thanked for the indication of allowable subject matter.

Claims 24, 33 and 42 have been amended to include the limitations of claims 25, 34 and 43, respectively. Furthermore, claims 26, 29, 31, 35, 36, 37 and 44 have been amended to independent claims.

35 U.S.C. 102 Rejection

Claims 24, 33, 42, and 47 are rejected under 35 U.S.C. 102(a) as being anticipated by the acknowledged prior art as shown in Figures 36-42. Claims 24, 33,

42 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Xu et al. (U.S. Patent No. 5,552,977).

The Patent Office (PTO) asserts that Applicant's acknowledged prior art discloses an apparatus for generating a three-phase-pulse-width modulation signal based on a combination of three basic voltage vectors and at least one or two zero vectors and/or a combination of three basic voltage vectors and two zero vectors. The Applicant respectfully disagrees. None of Applicant's description of the conventional art teaches generating a three-phase pulse width modulating signal based on a combination of "three basic voltage vectors and a zero vector", as recited in claims 24 and 47; "three basic voltage vectors and two zero vectors", as recited in claim 33; and "based on a combination of three basic voltage vectors and a zero vector and a combination of three basic voltage vectors and two zero vectors", as recited in claim 42.

For example, the Applicant discloses conventional systems for generating a pulse width modulation (PWM) signal for a semiconductor switching device. The first system is a three-phase modulation system, which generates a PWM signal using four kinds of basic voltage vectors, which includes two kinds of basic voltage vectors with a phase difference of 60 degrees and two kinds of zero vectors. See, specification at page 8, lines 16-25.

The second system is a two-phase modulation system, which generates a PWM signal using three kinds of basic voltage vectors, including two kinds of basic voltage vectors with a phase difference of 60 degrees and one zero vector. See, specification at page 8, lines 25-31.

The last system is an extended PWM system, which generates a three-phase PWM voltage signal using three kinds of basic voltage vectors, two kinds of basic voltage vectors with a phase difference of 120 degrees and one zero vector. Further, the three-phase PWM signal may be generated using three kinds of basic voltage vectors having a phase difference of 60 degrees.   See, specification at page 10, lines 3-13.

The PTO has mischaracterized Applicant's description of the conventional systems. The Office Action indicates that "a combination of" recited items does not set forth any structure different from the structure disclosed by the acknowledged prior art. The Applicant respectfully disagrees. While the language "a combination of" does not indicate how things are combined, it does indicate what is combined. Applicant's description of conventional systems does not anticipate any of the aforementioned claim features because none of the systems contain *all* of the requisite elements for each claimed combination. Accordingly, the Applicant respectfully requests withdrawal of this rejection.

The PTO also asserts that Xu discloses, in Figs. 1-3, the aforementioned features. The Applicant respectfully disagrees. Xu discloses a three phase inverter for generating a pulse width modulation signal for controlling switching devices; however, Xu does not disclose generating the pulse width modulating signal as claimed by the Applicant.

Xu's figures (i.e. FIGs. 1-3) illustrate a three phase inverter circuit which approximates the voltage vector V_s^* by combining two unit voltage vectors, (i.e., V_1^* and V_2^*) and one or two zero vectors of, V0 or V7. Xu's teachings are consistent

with the conventional two-phase modulation system discussed above and do not anticipate Applicant's aforementioned claimed features.

It should be noted that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. <u>Verdegaal Bros. v. Union Oil Co. of California</u>, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). It should further be noted that unless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 USC 102. <u>Net Moneyin, Inc. v. Verisign, Inc.</u>, 2008 U.S. App. LEXIS 21827 (Fed. Cir. Oct. 20, 2008).

Accordingly, Applicant respectfully requests withdrawal of this rejection and allowance of all pending claims.

<u>Conclusion</u>

Applicant invites the Examiner to contact Applicant's representative at the telephone number listed below if any issues remain in this matter, or if a discussion regarding any portion of the application is desired by the Examiner.
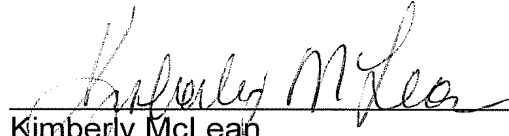
In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: <u>February 9, 2009</u>   By: _____

Kimberly McLean
Registration No. 62378

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620